

least one cylindrical magnetic domain at each of said intersections of said rectangular coordinate arrays;

- d. write circuit means to move said cylindrical magnetic domain in one of said crystals only within said plurality of contiguous domain retaining areas at said intersection to position said domain in response to signals representative of the binary value of a bit of digital information so that the position of said domain is a retained memory representation of the value of said bit of digital information; and
- e. read circuit means comprising a magnetoresistive sensor means responsive to the position of a magnetic domain in said second crystal to detect the location of said cylindrical magnetic domain in said first crystal within said plurality of areas at any preselected one of said intersections.

8. A magnetic memory as in claim 7 wherein said magnetic domain maintaining means comprises a magnetic bias field established by a housing member for said device, said member consisting of a material which is both a high coercivity permanent magnet and an electrical insulator.

9. A magnetic memory as in claim 7 wherein said array defining means comprises a pattern of electrical conductors submerged into the surface of at least one glass plate positioned in magnetic field coupled relationship to at least one of said crystal platelets.

10. A magnetic bubble random access memory having a nondestructive readout means comprising:

- a. magnetic bubble domain supporting means;
- b. write circuit means comprising a first movable

magnetic domain positioning array of field generating electrical conductors;

- c. read circuit means comprising a second movable magnetic domain positioning array of field generating electrical conductors electrically insulated from said first array of conductors; and

- d. magnetoresistive thin film sensor circuit means positioned in magnetically coupled relationship to at least a first magnetic domain which can be positioned by signals applied to said first array and a second magnetic domain which can be positioned by signals applied to said second array, the actual value of the resistance of said magnetoresistive sensor within a range of predetermined possible values of resistance affording a nondestructive readout of digital information represented by the position of said first domain as determined by signals which have been applied to said first array by indicating the direction of the coupling flux lines between said first and second domains with respect to said magnetoresistive thin film sensor.

11. A memory as in claim 10 and further including magnetic bias field establishing means comprising a housing member for said memory, said housing member consisting of a material which is both a high coercivity permanent magnet and an electrical insulator.

12. A memory as in claim 10 wherein each of said arrays of field generating electrical conductors is submerged into at least one surface of at least one glass plate positioned in magnetic field coupled relationship to at least one of said magnetic bubbles.

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